

**INTENSIVE ARCHEOLOGICAL SURVEY
OF THE CITY OF SAN ANTONIO'S
LOWER LEON CREEK GREENWAY
BETWEEN BANDERA ROAD AND INGRAM ROAD
IN BEXAR COUNTY, TEXAS**

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ABSTRACT

During the month of November 2008, archeologists from Hicks & Company conducted an intensive archeological survey of the City of San Antonio's proposed Lower Leon Creek Greenway. The proposed Lower Leon Creek Greenway will consist of a non-motorized, multi-use trail along Leon Creek between Bandera and Ingram Roads in northwestern San Antonio, Bexar County, Texas. The survey was conducted to comply with the City of San Antonio's Cultural Resource regulatory obligations under Section 106 of the National Historic Preservation Act of 1966, as amended and the Antiquities Code of Texas. The proposed project area is 5.98 miles in length with a width of 12 feet, totaling 8.7 acres. A total of 15 shovel tests were excavated along the entire proposed trail with two of these tests being positive for cultural material. The results of the survey indicate that a vast majority of the project area has been severely disturbed by previous mining, development, landfill, and erosion. One previously recorded archeological site, 41BX1593, was identified within the proposed project area. This site was recorded as a prehistoric open campsite and the elements of the site within the proposed project area consisted of a low density scatter of lithic debitage that has been redeposited from an adjacent upland terrace. This report concludes that the portions of Site 41BX1593 within the proposed project area are not eligible for inclusion in the National Register of Historic Places or for listing as a State Archeological Landmark. Furthermore, it is concluded that the proposed undertaking will have no effect upon historic properties within the proposed project area. This report is submitted as partial fulfillment of Texas Antiquities Code Permit #5074. All relevant project materials will be curated at the Texas Archeological Research Laboratory upon completion of the project.

TABLE OF CONTENTS

ABSTRACT	i
INTRODUCTION AND MANAGEMENT SUMMARY	1
ENVIRONMENTAL BACKGROUND.....	3
Land Use in Project Area.....	5
CULTURAL BACKGROUND AND PREVIOUS INVESTIGATIONS	7
Paleoindian Period (11,500-8,800 BP).....	7
Archaic Period (ca. 8,800-1,200 BP).....	7
Late Prehistoric Period (1,200-400 BP).....	8
Historic Period (400 BP to present).....	8
Previous Sites and Investigations.....	10
RESEARCH DESIGN AND FIELD METHODOLOGY.....	13
RESULTS OF FIELD INVESTIGATIONS.....	15
Previously Recorded Archeological Sites.....	27
41BX73.....	27
41BX1593.....	27
CONCLUSIONS AND RECOMMENDATIONS	35
BIBLIOGRAPHY	37

LIST OF TABLES

Table 1	Previously Recorded Sites Within One Kilometer of the Project Area.....	11
Table 2	Results of Shovel Testing along the Lower Leon Creek Greenway	28

LIST OF FIGURES

Figure 1	Northern terminus of project area looking southeast across Leon Creek. The Bandera Road Bridge is on the left.	15
Figure 2	Looking southeast along edge of landfill. The proposed trail follows along the top edge of the landfill.	16
Figure 3	Dumping and scouring along the proposed trail, looking south.....	16
Figure 4	Exposed bedrock and scouring along proposed trail, looking south.	17
Figure 5	Deflated and braided stream channel in proposed project area, looking south.	17
Figure 6	Artificial levee immediately west of proposed project area, looking northwest.....	18
Figure 7	Low area behind residential development with artificial levee at left.	18
Figure 8	Push pile of limestone and concrete immediately west of proposed project area.	19
Figure 9	Water or sewer main manhole on centerline of proposed project area.	19
Figure 10	Looking north down two-track road behind residential development at transmission line crossing.	20
Figure 11	Artificial drainage just north of transmission line, looking northeast.	21
Figure 12	Asphalt parking lot just north of Grissom Road. The proposed trail follows along the outside edge of the parking lot.	21
Figure 13	Looking north at areas north of asphalt parking lot. Note the artificial berm at left and dumping.	22
Figure 14	Landfill and artificial terrace just south of Grissom Road.	23
Figure 15	Proposed trail in Culebra Creek.....	23
Figure 16	General view of project area between Grissom Road and Ingram Road, looking northwest.	24
Figure 17	Quarry tailings in proposed project area between Grissom Road and Ingram Road.	25
Figure 18	Artificial drainage leading to Spiral Drive and Timberbrook Road.	25
Figure 19	Quarry near south end of project area. The area in the left portion of the photo is landfill.....	26

Figure 20	Proposed trail following a two-track road at the south end of the project area. Note extensive dumping on the margins of the road.	26
Figure 21	Plan Map of Site 41BX1593.....	29
Figure 22	View of site extension area looking west from Shovel Test BJ6 toward Shovel Test MS2.	30
Figure 23	Transmission line right-of-way with proposed trail terminus marked in pink and orange on the surface.	31
Figure 24	View looking west from Shovel Test BJ6 at area of ADA trail improvements	31
Figure 25	Gullies on surface southeast of Shovel Tests MS2 and BJ6.	32

LIST OF PLATES

		Follows Page
Plate 1	Project Location Map	2
Plate 2	Results of Field Investigations	16
Plate 3	Results of Field Investigations	16

INTRODUCTION AND MANAGEMENT SUMMARY

During the month of November 2008, archeologists from Hicks & Company conducted an intensive linear archeological survey of the City of San Antonio's proposed Lower Leon Creek Greenway. The Lower Leon Creek Greenway consists of a non-motorized, multi-use trail along Leon Creek between Bandera and Ingram Roads west of San Antonio in Bexar County, Texas (Plate 1). The proposed project area is 5.98 miles in length with an impact width of 12 feet, totaling 8.7 acres. The proposed undertaking is being conducted under a U.S. Army Corps of Engineers Nationwide 14 permit (#200600347) and must therefore comply with Section 106 of the National Historic Preservation Act of 1966, as amended (NHPA). The proposed project will also be constructed on lands owned by the City of San Antonio and is therefore subject to the Texas Antiquities Code (TAC). Terra Design Group, Inc. contracted with Hicks & Company to conduct the archeological survey and fulfill the City of San Antonio's requirements under Section 106 of the NHPA and the TAC.

As stated previously, the proposed Lower Leon Creek Greenway is located in northwest San Antonio, Texas between Bandera and Ingram Roads. The proposed project area will begin on the west side of Leon Creek immediately north of the Bandera Road Bridge. The proposed trail immediately crosses Leon Creek, and then follows the east (left) bank of Leon Creek where it then heads in a southerly direction. Between Bandera and Grissom Roads, the trail follows a single course with no spurs or additional trailheads. On the north side of Grissom Road the proposed trail crosses back over to the west (right) bank of Leon Creek where it proceeds south and then west until splitting into two trails just northeast of the confluence of Culebra Creek and Leon Creek and west of Brookport Drive.

The western split of the trail continues along Leon Creek's right bank until reaching Culebra Creek where it turns west. The proposed trail follows along the left bank of Culebra Creek along an existing two track road until terminating at a transmission line right-of-way in Cathedral Rock Nature Park. A small spur heads south from the Culebra Creek portion of the trail across the creek and along a two track road to Pipers Road. The eastern split of the trail along Leon Creek crosses the creek at the split and continues southeast along the left bank until reaching Ingram Road. Two small spurs extend off the trail between the split and Ingram Road and extend to proposed trailheads at Spiral and Timberbrook Roads and at the south end of the trail to the intersection of Huebner Creek and Ingram Road.

The proposed trail is located both within the floodplain of Leon and Culebra Creeks and in the adjacent uplands. The majority of the project area has been heavily disturbed by previous gravel mining and landfill operations. Unauthorized dumping and associated surface disturbance is prevalent throughout the proposed project area and is highest in the areas between Bandera and Grissom Roads and the southern portion of the proposed trail north of Ingram Road. In addition to the heavy disturbance within the proposed project area, the areas adjacent to the project area are heavily developed for residential, commercial, and light industrial use.

Background research for the project revealed that there are 16 previously recorded sites (41BX54, 41BX58, 41BX59, 41BX60, 41BX61, 41BX62, 41BX73, 41BX74, 41BX324, 41BX1250, 41BX1592, 41BX1593, 41BX1594, 41BX1595, 41BX1596, and 41BX1597)

within one kilometer of the proposed project area. Of these 16 sites, only two sites, Sites 41BX73 and 41BX1593, appear to overlap with the proposed project area. No evidence of Site 41BX73 was observed within the project area, but elements of Site 41BX1593 were found to extend south into the proposed project area. The elements of Site 41BX1593 within the proposed project area consist of colluvially redeposited lithics from an adjacent, higher terrace. Due to the secondary context of archeological deposits, it is the opinion of the Principal Investigator that the portions of Site 41BX1593 within the proposed project area are not eligible for inclusion in the National Register of Historic Places (NRHP) or for listing as a State Archeological Landmark (SAL). No other cultural resources were identified within the proposed project area and it is recommended that no further archeological investigations are necessary for the proposed Lower Leon Creek Greenway between Bandera and Ingram Roads.

The fieldwork for the project was conducted on November 4 and 5 of 2008, and consisted of an intensive linear pedestrian survey of the entire proposed trail between Bandera and Ingram Roads. The pedestrian survey was augmented with shovel testing in areas where intact landforms were present. A total of 15 shovel tests were excavated; two of these tests were positive for cultural material in the vicinity of Site 41BX1593. The previously recorded site 41BX1593 was found to extend into the proposed project area. Outside of the expanded site boundaries of Site 41BX1593, no artifacts were observed on the surface and no artifacts were collected during the course of the survey. No new archeological sites were recorded as a result of the survey investigations. Bradford M. Jones served as the Principal Investigator for the project with John A. Campbell serving as Project Archeologist. Matt Stotts assisted with fieldwork and report production. The fieldwork and archeological survey report are being completed as partial fulfillment of Texas Antiquities Code Permit #5074. All relevant project materials will be curated at the Texas Archeological Research Laboratory (TARL) upon completion of the project.

IMAGE REDACTED



USGS Quadrangles: Heiotes, Cúebre Hill, Castle Hills & San Antonio West

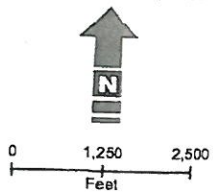


Plate 1
Project Location Map

Key to Features

- Archeological Sites (Point)
- Proposed Leon Creek Trail Alignment
- Archeological Surveys (Linear)
- Archeological Sites (Polygon)
- Archeological Surveys
- Environmental Site Assessments
- 1973 Gravel Mining

ENVIRONMENTAL BACKGROUND

The project site lies in Bexar County, in south central Texas, at the edge of the Balcones Escarpment. The project area is located on the Helotes and Culebra Hill 7.5' USGS Quadrangles. The Balcones Fault Zone separates relatively horizontal strata of the Edwards Plateau toward the northwest from the more steeply dipping strata of the Gulf of Mexico Basin toward the southeast (Barnes 1983). The surface geology within the project area is primarily Pleistocene age fluvial deposits consisting of gravel, sand, silt, and clay. Portions of the Pecan Gap Chalk, an Upper Cretaceous limestone, outcrop in the eastern and southern portions of the project area; primarily along Bandera Road and at Culebra Creek. There are two major soil associations that overlap with the proposed project area, the Lewisville-Houston Black Association and the Venus-Frio-Trinity Association. Within these associations the proposed project area traverses five soil series: Trinity-Frio, Lewisville, Venus, Patrick, and Tarrant.

The most common series crossed by the proposed project is the Trinity-Frio series (Tf). These soils are frequently flooded (typically once per year or more) and occupy the areas within streambeds and along the margins of the stream channels. The soils generally consist of deep clay to gravelly clay, and experience either thin alluvial deposition or scouring. Shifting channels that are shallow and poorly defined are also common within this classification and were observed during this survey. Within the project area these soils were generally observed as heavily deflated and scoured. The Lewisville soils (LvA and LvB) are also recent alluvial sediment with deep, very dark grayish brown to brown silty clays (0 to 110 cmbs) overlying calcareous reddish yellow silty clays. Below these reddish yellow clays are deep beds of rounded limestone gravels (Taylor et al. 1991).

The Venus and Patrick soils formed in older alluvial and outwash sediments from the Pleistocene. The Venus soils (VaA and VaB) are typically dark grayish brown loam or clay loam (0 to 35 cmbs) overlying calcareous brown loam or clay loam to a depth of 75 centimeters below surface. Underlying these two horizons are light yellowish brown or very pale brown loam, sandy clay loam, or clay loam. The Venus soils generally occur on older terraces or alluvial fans. The Patrick soils (PaB and PaC) are shallower than the Venus soils and are characterized by dark grayish brown loam to gravelly clay loam (0 to 40 cmbs) overlying dark brown to brown clay loam to loam to a depth of 50 to 75 cm below surface. The Patrick soils overlie weakly to strongly cemented limestone gravels (Taylor et al. 1991).

The Tarrant soils (TaB) are found primarily within the uplands adjacent to Leon Creek. These soils are shallow and developed over the hard limestone of the Edwards Group. The soils in this group range from 0 to 25 cm in depth and consist of calcareous very dark grayish brown clay loam. Scattered stones, gravel, channery fragments, cobblestones, and flagstones ranging from 0.5 cm to 60 cm in size are common on the surface and within the upper zone of these soils. In addition to the above soils, the project area traverses two areas mapped as Pits & Quarries (Pt) (Taylor et al. 1991). These pit and quarry areas are mapped over a small area and are more extensive than mapped in the soil survey, which was conducted in 1962, prior to extensive gravel mining in the 1970s. The portions of the project area that had intact landforms were typically associated with the Venus, Patrick, and Tarrant soils. Of these three soil types only the Venus and Patrick soils are likely to contain intact archeological deposits. However, these deposits would

likely be shallowly buried by colluvial and possibly some alluvial deposition and have moderate potential for preservation.

The project area and Leon Creek are located in the San Antonio River Basin, which has a drainage area of 4,180 square miles. It is bounded on the north and east by the Guadalupe River basin and on the west and south by the Nueces River basin and San Antonio-Nueces coastal basin. Leon Creek originates in northwestern Bexar County and is fed by a number of small springs. On the south side of San Antonio, Leon Creek merges with the Medina River and eventually the San Antonio River. The San Antonio River flows southeast for 180 miles through Wilson, Karnes, and Goliad Counties. It empties into the Guadalupe River approximately four miles north of Tivoli, at the intersection of Calhoun, Refugio, and Victoria Counties. Additional streams in or near the project area include French Creek, Culebra Creek, and Huebner Creek. The Balcones Fault Zone Edwards Aquifer is a karst aquifer associated with the project area.

The project area is located on the border of the Edwards Plateau and Blackland Prairie regions of Texas. Reptiles and amphibians common to the area include the Cricket Frog (*Acris crepitans*), Gulf Coast Toad (*Bufo valliceps*), Red-eared Slider (*Trachemys scripta*), Spiny Soft-shelled Turtle (*Apalone spinifera*), Texas River Cooter (*Pseudemys texana*), Green Anole (*Anolis carolinensis*), Texas Spiny Lizard (*Sceloporus olivaceus*), Coachwhip (*Masticophis flagellum*), Diamond-backed Water Snake (*Nerodia rhombifer*), and Texas Rat Snake (*Elaphe obsoleta*). Common mammals of the area include the Virginia Opossum (*Didelphis virginiana*), Mexican Free-tailed Bat (*Tadarida brasiliensis*), Eastern Cottontail (*Sylvilagus floridanus*), Hispid Cotton Rat (*Sigmodon hispidus*), Gray Fox (*Urocyon cinereoargenteus*), and Coyote (*Canis latrans*).

According to McMahan et al. (1984), the project area is located within the Live Oak – Ashe Juniper Parks (*Quercus virginiana* – *Juniperus ashei*), Live Oak – Mesquite – Ashe Juniper Parks (*Quercus virginiana* – *Prosopis glandulosa* – *Juniperus ashei*), and Live Oak – Ashe Juniper Woods (*Quercus virginiana* – *Juniperus ashei*) Vegetation Types of Texas. Urban/developed cover types (with scattered remaining or introduced vegetation) in the project area include residential neighborhoods and farmstead facilities, commercial operations, and transportation corridors. Woody vegetation in the vicinity of the project area includes; Ashe juniper (*Juniperus ashei*), pecan (*Carya illinoensis*), chinaberry (*Melia azedarach*), Texas live oak (*Quercus fusiformis*), and honey mesquite (*Prosopis glandulosa*). Other vegetation in the vicinity of the project area includes agarita (*Berberis trifoliata*), yaupon (*Ilex vomitoria*), and prickly pear (*Opuntia* sp.). Herbaceous vegetation communities include mixtures of introduced and native grasses and wildflowers. Typical grasses of the project area include bermudagrass (*Cynodon dactylon*) and Johnsongrass (*Sorghum halepense*). Other herbaceous plants found in the project area include silver-leaf nightshade (*Solanum elaeagnifolium*), common greenbrier (*Smilax bona-nox*), Texas dandelion (*Pyrrhopappus multicaulis*), milkweed (*Asclepins* sp.), Virginia creeper (*Parthenocissus quinquefolia*), and Indian paintbrush (*Castilleja indivisa*), among other native grasses, wildflowers, and forbs (McMahan et al. 1984).

LAND USE IN PROJECT AREA

Land use in the project area over the last 50 years has consisted primarily of gravel mining, residential and commercial development, and landfill. Prior to that, the area was primarily used for agriculture with cleared crop land on the higher terraces adjacent to the floodplain and scrub land/riparian zones along the channel of Leon Creek. The City of Leon Valley was incorporated in the 1950's and a review of topographic maps from 1953, 1966, 1973, 1982, 1992, and 1993 show the vast majority of residential development occurring in and around the project area between 1966 and 1982. The 1973 USGS 7.5' Culebra Hill and Helotes quadrangle maps show the greatest expanse of gravel mining in the area. These areas are highlighted on the project location map (**Plate 1**). As stated earlier, it is likely the gravel mining operations exceeded the limits portrayed on the 1973 map. The main channel of Leon Creek appears to be relatively unaltered in so much as there are no dams or evidence of rechanneling. The gravel mining, landfilling, and development has left most of the Leon Creek floodplain in a disturbed state with culturally modified terraces, artificial terraces, levees, and hummocky, deflated terrain. In addition, unauthorized trash dumping is very common over the entire project area.

CULTURAL BACKGROUND AND PREVIOUS INVESTIGATIONS

The project area is located within the central Texas archeological region. Specifically, it lies on the southwestern edge of the Balcones Escarpment, characterized by the presence of numerous prehistoric sites. Most chronologies for central Texas are based on four main periods, representing roughly 12,000 years of habitation. The sequence from Collins (2004) is as follows: Paleoindian period (ca. 11,500-8,800 BP), Archaic period (ca. 8,800-1,200 BP), the Late Prehistoric period (1,200-400 BP), and the Historic Period (400 BP to present). The 6,600-year Archaic period is typically further subdivided into Early (8,800-6,000 BP), Middle (6,000-4,000 BP) and Late (4,000-1,200 BP).

PALEOINDIAN PERIOD (11,500-8,800 BP)

Though previous theories postulate that Paleoindian peoples were highly mobile and heavily reliant on big game hunting (Suhm et al. 1954; Hester 1980), more current investigations have contradicted this model (Collins 2004). One reason for this is that until recently, few Paleoindian sites within the central Texas area had been well studied. However, work at sites such as Pavo Real near San Antonio, Wilson-Leonard in Williamson County and the Gault Site in Bell County have shown that Paleoindian peoples adhered to a more generalized hunting and gathering strategy in which they might return to the same site repeatedly on a seasonal basis. Within central Texas most Paleoindian sites are located along the ecotonal region between the Balcones Escarpment and the Blackland Prairie, suggesting that these campsites were intentionally situated to exploit a variety of resources. Faunal remains collected from sites like Wilson Leonard, Pavo Real and the Gault site support this idea. So too do lithic artifacts and other features. Paleoindian lithic artifact types comprise a diverse assemblage derived from biface, flake, and prismatic blade technology (Collins 2004), in addition to engraved limestone, stone bolas, and ochre. Projectile points typically consist of well-made fluted lanceolate points produced from high quality chert. A stone-paved floor found in the Kinkaid Rock Shelter attests to an advanced degree of social organization and stability (Collins 2004).

ARCHAIC PERIOD (CA. 8,800-1,200 BP)

The Archaic spans over 9,000 years of prehistory and is typically divided into sub periods, which reflect changes in technology, site type, and density. Lithic technology changed radically during this time, from one reliant on prismatic blades to one oriented more toward multidirectional core utilization. Dart points typically became smaller and stemmed. In general it is posited that early Archaic occupations were small, widely distributed, and non-specialized (Black and McGraw 1985). Like the Paleoindian period that preceded it, the early Archaic people were highly nomadic hunter-gatherers practicing a generalized subsistence strategy. Archeologists typically believe that population density was low during the early Archaic period, and increased steadily into the Late Archaic.

Burned Rock middens appear first in the early Archaic period. Burned rock midden sites are considered to be characteristic of central Texas archeology (Black 1989) of the Archaic period. These fire-cracked and discolored limestone rock features are found in

creek terrace or upland settings and have other cultural materials within and around them indicating an open occupation site (Black 1989). Burned rock middens are circular, mounded accumulations some 10-25 meters across, having a basic annular (concentric) morphology (i.e., a dense ring of rocks surrounding a distinct center and surrounded by a thinning periphery; Black et al. 1997). The wide variety of plant and animal remains found within middens suggests that these ovens served as communal plant and animal processing facilities. Ultimately, it is believed that burned rock middens are a consequence of perhaps hundreds of cooking fires that were used and reused in one place over many years (Black et al. 1997).

LATE PREHISTORIC PERIOD (1,200-400 BP)

The Late Prehistoric in central Texas is marked initially by the replacement of the atlatl with the bow and arrow (Johnson 1995). Larger dart points are replaced by small, thin arrow points. Typical types found in central Texas include Scallorn and Perdiz. Other lithic tool types such as unifacial end scrapers, flake tools, alternately beveled knives, and drills occur in greater frequency during the Late Prehistoric Period, particularly at sites associated with an emphasis on the hunting of bison. Nonetheless, there is every indication that broad-based hunting and gathering subsistence continued into the Late Prehistoric period, though groups seem to have been less mobile, frequently returning to campsites on a seasonal basis. It is also during the Late Prehistoric period that pottery appears for the first time in central Texas sites. This central Texas pottery, often referred to as Leon Plain, was typically made of sandy paste, and tempered with bone or shell.

HISTORIC PERIOD (400 BP TO PRESENT)

The first Europeans to reach the region around present day San Antonio came in 1691 with an expedition led by Domingo Teran de los Rios and Fray Damian Massanet. The local tribe of Native American Payaya Indians apparently referred to the area as Yanaguana; Massanet renamed it San Antonio de Padua in honor of St. Anthony's Memorial Day in June. This first group did not stay to settle the land. The second recorded expedition to the area, in 1709, included two Franciscans, fathers Antonio de San Buenaventura y Olivares and Isidro Felix de Espinosa. This group also did not settle, but believed the area held great promise for development. Another expedition passed through in 1714, and Espinosa returned in 1716, this time making an official recommendation for the establishment of a mission. In 1718, the final expedition arrived to settle the area, led by Martin de Alarcon (Foster 1995). The population of the area fluctuated as a result of disease and hostile Indian attacks, but slowly continued to grow; the vast majority of the population stayed near the missions and the San Antonio River. In 1753 and 1754, groups of Spanish explorers departed from San Antonio, heading northwest to scout out locations for a proposed Apache mission in the San Saba River valley (in present day Menard County.) In 1757, a settlement group traveled through the project area on its way to establish the mission, utilizing the Comanche trail followed by the earlier mission scouts (Weddle 2002). The expeditions mark an early, recorded use of this transportation corridor. Later expeditions, including a visit to the Comanche lands in 1805, followed the same trail, by then referred to as "Camino de las Casas Viejas" (McGraw to Kormacher, personal communication 2002).

Although some Americans visited the San Antonio region prior to the 1830s, not until Anglo colonists started to arrive around 1830 did Americans establish a real presence.

While the colonists were initially peaceful, differences of opinion led to increasing hostilities between the Mexican government and the American settlers, along with Hispanic citizens of the area. In October of 1835, Texas revolutionaries laid siege to San Antonio, eventually forcing the surrender of the Mexican garrison. Mexican forces under General Antonio Lopez de Santa Anna recaptured the town several months later at the Battle of the Alamo. Texan victories over Santa Anna in the following months returned San Antonio to Anglo control, although Mexican forces twice occupied the city in 1842 (Long 2002). The annexation of Texas by the United States at the end of 1845 opened up new possibilities for the settlement of the frontier. Through the second half of the 1840s, the government established a number of military forts to encourage settlement in the Hill Country (at the time the frontier of the state), with San Antonio as a major supply depot. Soldiers at Fort Martin Scott helped protect the nearby new German settlement of Fredericksburg, and Camp Houston oversaw the San Antonio-Fredericksburg road passing just to the east of the project area along Salado Creek (Brooks 2002; Kohout 2002).

Planned and permanent public transportation routes came to San Antonio with the stagecoach roads, starting in 1847 (Stever 2002). The first routes carried mail and passengers between San Antonio and Houston, Port Lavaca, and Corpus Christi. By 1851, San Antonio had stagecoach mail service to El Paso; in 1857, the service expanded to reach San Diego, California. Following the stage lines, railroads soon shaped the Bexar County economy as well. Beginning in 1877 with the Galveston, Harrisburg and San Antonio Railway, and continuing through the construction of the International and Great Northern Railway (1881) the population of San Antonio boomed and transitioned to a more "American" community.

Beginning in the latter half of the 19th century and peaking during World War I and II, the San Antonio area became a region intensively utilized by the United States Military for bases and supply depots including Brooks, Randolph, and Kelly Air Bases and Camps Stanley, Travis, and Bullis. During this period, ranching and agricultural production in rural regions assisted the War effort and stimulated the smaller economies (Long 2002).

The project area is located along Leon Creek near the community of Leon Valley. Fray Isidro de Espinoza is credited with first calling the stream east of the Medina River "Leon Creek" (or Arroyo del Leon) during his expedition of 1709 (Foster 1995:99). Traces of the early settlement of Leon Valley remain at the Huebner homestead, located east of and outside of the project area, which was established in the 1850s (Leon Valley Historical Society 2008). The homestead's still standing limestone two story house (Site 41BX1429) was built in 1862 and served as a residence and stagecoach stop. It was later owned by the family of Judge Joseph Onion, and is today maintained by the Leon Valley Historical Society. The present community of Leon Valley was founded in the 1950s (Long 2008). By 1960 the population was small, with 536 residents, but has grown substantially in subsequent decades. In 2000 the population stood at 9,239, a small drop from 1990 (Long 2008). This increase in population is reflected in the neighborhoods and commercial centers that have developed along the creek, particularly since the 1970s. Prior to this time, and continuing to today, the margins of Leon Creek have been important gravel and limestone quarries, the use of which has significantly altered the landscape.

PREVIOUS SITES AND INVESTIGATIONS

Background research for this project was conducted using the Texas Historical Commission's (THC's) Archeological Sites Atlas and records available at TARL. According to available data, there are no Official State Historical Markers (OSHM's) located within the project area. Nor are there any SALs, cemeteries, or sites listed on the NRHP. As the proposed trail is currently configured, there are 16 previously recorded archeological sites within one kilometer of the proposed project area. All of these sites are prehistoric sites consisting of lithic scatters, open campsites, and rock shelters. The locations of all 16 of these sites, 41BX54, 41BX58-62, 41BX73, 41BX74, 41BX324, 41BX1250, and 41BX1592-1597 are provided on a topographic map (**Plate 1**) and summarized in **Table 1**. Prior to the field investigations, only one of these sites, 41BX73, was mapped within the currently proposed project area. An overview of these sites and the surveys associated with their recording is presented below.

Sites 41BX54, 41BX58-62, 41BX73, 41BX74, and 41BX1250 are located to the north of Bandera Road, and with the exception of Site 41BX73, are outside of the current project area. Other than Site 41BX1250 which was recorded by Frank Weir in 1997, all of these sites were originally recorded in 1971 by Paul McGuff. Subsequently, all of these sites were revisited as part of the Leon Creek Greenway Surveys by The University of Texas at San Antonio (UTSA) in 1998 and 2001, and it was determined that all of the sites lacked deposits that warranted inclusion in the NRHP. Only Site 41BX73 would potentially be impacted by the proposed project, but a revisit to the site found no indication of it and the area has been developed with highway embankments and a concrete sidewalk. Because the other sites will not be affected by the construction of the proposed southern segment of the Leon Creek Greenway south of Bandera Road, no further discussion of these sites is warranted.

Though several surveys have been conducted along Leon Creek north of Bandera Road, no full scale systematic survey of the current project area has been conducted between Bandera Road to the north and Ingram Road to the south. However, four previous surveys do overlap portions of the proposed project area (**Plate 1**). South of Bandera Road, a 1977 areal survey that was conducted by the U. S. Environmental Protection Agency overlaps the northern terminus of the proposed trail. No sites were recorded as a result of this survey. Though apparently unassociated with any formal archeological survey, Site 41BX324 is located within the general project area between Bandera and Grissom Road. The site was recorded by J. A. Jaquier in 1977, but is on the opposite side of Leon Creek from the proposed trail. Present information available on this site is limited, though it suggests that there is little depth or research potential to the site. Given the significant distance of this site from the proposed trail, no potential impacts are anticipated as a result of the current project. In 1985 the Federal Highway Administration conducted a narrow, linear survey along Grissom Road, which also overlaps small portions of the proposed trail, but no sites were recorded within the project area during this survey.

South of Grissom Road, a 2004 SWCA survey along Leon Creek conducted for the San Antonio Water System (Carpenter 2005) and a 2004 Tierras Antiguas survey of Cathedral Rock Nature Park (Nickels 2004) also cover small portions of the proposed trail alignment. The 2004 SWCA survey, which was primarily situated within or adjacent to the Leon Creek channel, failed to find archeological sites near the current project area and noted significant modification of the areas adjacent to Leon Creek resulting in little

potential for sites to be present. The 2004 Tierras Antiguas survey recorded six new archeological sites (41BX1592-1597). In general this project found that prehistoric sites occurred along the upper terraces overlooking Culebra Creek, areas that are generally outside of the proposed project area. None of the recorded sites are within the proposed project area, but two archeological sites were mapped relatively close. The first, Site 41BX1593, is a prehistoric lithic and burned rock scatter of unknown age, found on a high terrace over Culebra Creek above the terminus of a western branch of the trail. During the current survey, prehistoric artifacts were found near the trail terminus on the slope and lower terrace below Site 41BX1593. As a result, the site boundary was expanded. Further discussion of this site is presented in the Results of Field Investigations. The second site, 41BX1594, is another prehistoric site of unknown age located on a low terrace adjacent to the main Culebra Creek channel to the northeast of the proposed trail. This latter site was believed to have been negatively impacted by erosion and was not considered to be a significant site (Nickels 2004). No indication of this site was noted during the current survey. The remaining sites in this survey – 41BX1592, 41BX1595-1596 – were outside of the current project area.

Table 1 Previously Recorded Sites Within One Kilometer of the Project Area

Site	Distance from Proposed Alignment	Site Type	Site Description	Project/Recorder/Year	NRHP Status
41BX54	250 meters	open campsite	Lithic scatter identified on a remnant portion of land in a gravel pit. Debitage and burned rock all collected from site. Weir noted similar artifacts including a biface within the top meter of sediment during backhoe trenching.	Leon Creek Survey/ P. McGuff, E. McGuff/ JAN 1971 also Bandera Commons Apartments HUD/ F.A. Weir/SEP 1997	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX58	140 meters	campsite	Site consists of one midsection[?], and a projectile point. Area is deflated with bedrock 6 inches below surface.	Leon Creek Survey/ P. McGuff, E. McGuff/ JAN 1971	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX59	95 meters	campsite	Site is recorded as Archaic and is located on a mound with a high concentration of burned rock [BRM?]. All materials were collected.	Leon Creek Survey/ P. McGuff/ JAN 1971	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX60	830 meters	open campsite	Archaic site found in bluff wall. Montell point, Almagre point, burned rock, anddebitage.	Leon Creek Survey/ P. McGuff, E. McGuff/ JAN 1971	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX61	380 meters	rockshelter	Rockshelter and cave with no observed cultural material.	Leon Creek Survey/ P. McGuff, B. Fawcett/ JAN 1970	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX62	440 meters	rockshelter	Large rockshelter about 50 feet above the creek. Several flakes identified on talus slope.	Leon Creek Survey/B. Fawcett, P. McGuff/ JAN 1971	<i>Recommended NRHP-ineligible by UTSA in 1998</i>

Table 1 Previously Recorded Sites Within One Kilometer of the Project Area

Site	Distance from Proposed Alignment	Site Type	Site Description	Project/Recorder/Year	NRHP Status
41BX73	160 meters	burial	Native American burial discovered in the 1940s and gifted to TARL. Burial included shell necklace and young teeth.	Leon Creek Survey/P.McGuff/ JAN 1971	No recommendation of eligibility, but site was located in what is currently a pond. Recorder reports that the burial was excavated by pick after construction discovery.
41BX74	250 meters	open campsite	Lithic scatter on the surface, in most cases lying on bedrock. All material was collected and site is reported as deflated.	Leon Creek Survey/unknown/ JAN 1971	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX324	170 meters	surface scatter	TexSite form includes no artifact information, only note of observed surface scatter 50 by 100 meters in size.	J.A. Jaquier/1977	No recommendation on eligibility, but recommends no further work
41BX1250	650 meters	open campsite	Prehistoric site with few burned rock, 1 modified flake, 2 core fragments, and 2 thinning flakes. Identified in trenching within the top 18 inches of soil.	Bandera Commons Apartments HUD/ F.A. Weir/SEP 1997	<i>Recommended NRHP-ineligible by UTSA in 1998</i>
41BX1592	110 meters	open campsite	Prehistoric site with abundant fire cracked rock, flakes, shatter, 3 unifaces, and four possible hearth features. Divided into 2 areas. Area A disturbed, Area B undisturbed with buried hearths.	Cathedral Rock Nature Park Survey/Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended
41BX1593	60 meters	open campsite	Prehistoric site with fire cracked rock and debitage in upper 40 centimeters of upland terrace site.	Cathedral Rock Nature Park Survey/Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended
41BX1594	45 meters	open campsite	Prehistoric site with fire cracked rock, 1 biface, flakes, and a possible surface hearth, but considered questionable integrity due to erosion.	Cathedral Rock Nature Park Survey/Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended
41BX1595	430 meters	lithic scatter	Prehistoric site with 1 uniface and 2 flakes found in likely disturbed context.	Cathedral Rock Nature Park Survey/Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended
41BX1596	495 meters	open campsite	Prehistoric site with 1 biface, 1 flake, and fire cracked rock associated with modern trash.	Cathedral Rock Nature Park Survey/Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended
41BX1597	85 meters	unknown	Mammoth bone, chert core, and fire cracked rock found in creek cut bank and considered in likely secondary context.	Cathedral Rock Nature Park Survey/ Tierras Antiguas Archeological Consulting/2004	No eligibility recommendation; Avoidance is recommended and potential geomorphological analysis

RESEARCH DESIGN AND FIELD METHODOLOGY

This section presents the research design and field methodology for the intensive survey investigations of the City of San Antonio's proposed Lower Leon Creek Greenway between Bandera and Ingram Roads in Bexar County, Texas. The archeological investigations for the proposed greenway were conducted between November 4 and 5 of 2008. All investigations were conducted in accordance with the National Historic Preservation Act of 1966, as amended, and 36 CFR 800, the Secretary of the Interior's *Standards and Guidelines for Archaeology and Historic Preservation* (48 FR 44716-44742), and the *Secretary's Standards for Identification* (48 FR 44720-44723), the Texas Antiquities Code [13 TAC 26.5(35), 13 TAC 26.20(1), and 13 TAC 26.20(2)], and TAC Permit #5074. All archeological deposits identified within the project area were evaluated using the NRHP criteria of significance (36 CFR 60.4). The NRHP criteria are as follows:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of state and local importance that possess integrity of location, design, setting, materials, workmanship, feeling, and

- a. that are associated with the events that have made a significant contribution to the broad patterns of our history; or
- b. that are associated with the lives of persons significant in our past; or
- c. that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic value, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- d. that yielded, or may be likely to yield, information on prehistory or history.

Criteria considerations: ordinarily cemeteries, birthplaces, or graves of historical figures; properties owned by religious institutions or used for religious purposes; structures that have been moved from their original locations, commemorative in nature; and properties that have achieved their significance within the past 50 years shall not be considered eligible for the NRHP (36 CFR 60.4)

Typically the most applicable criterion for evaluating archeological properties is Criterion D. In general, prehistoric and historic sites containing subsurface deposits in the form of features or middens that are eligible for inclusion in the NRHP fall within Criterion D. Sites that are viewed as likely to contain intact subsurface deposits are determined by occupation intensity, function or type of site, and the degree of disturbance. Site integrity and condition are key factors in evaluating NRHP significance.

Background research for the project was conducted using the online databases of the THC's Online Sites Atlas and the online map collection at the University of Texas' Perry-Castañeda Library. Additional research was conducted at the THC and TARL. The field investigations included a pedestrian survey of the linear corridor consisting of a visual inspection of the ground surface augmented by shovel testing. Shovel testing was conducted in areas with intact landforms at intervals of sixteen shovel tests per mile. All shovel tests were excavated to a depth of one meter, to bedrock, or to culturally sterile

soils, whichever was encountered first. Soil from all shovel tests was screened through ¼" mesh hardware cloth.

Artifacts observed in the field were recorded and analyzed in the field and not collected. Photographs were taken of all site locations, pertinent features, and general areas of the project. All shovel tests, sites, and photographs were recorded on standardized forms in the field. A Texas State Site Form (revisit) will be submitted for the only site recorded within the project area, Site 41BX1593. All relevant project materials, including, but not limited to, field notes, shovel test records, photographs, and photograph inventories will be submitted for curation at TARL upon completion of the project.

RESULTS OF FIELD INVESTIGATIONS

Archeologists conducted an intensive pedestrian survey of the City of San Antonio's proposed Lower Leon Creek Greenway project in the Leon Creek Valley between Bandera and Ingram Roads in Bexar County, Texas (Figure 1). The survey, totaling 5.98 miles in length, included ground surface inspection and the excavation of 15 shovel tests (Plates 2 and 3). Of these 15 shovel tests, two were positive for cultural material in the vicinity of Site 41BX1593. Site 41BX1593 was the only previously recorded archeological site found to exist within the proposed project area and no additional archeological sites were observed. The vast majority of the project area was found to be highly disturbed by gravel mining, landfills, trash dumping, and development.

Figure 1: Northern terminus of project area looking southeast across Leon Creek. The Bandera Road Bridge is on the left.



The areas between Bandera and Grissom Roads had the highest percentage of non-culturally affected landforms. However, approximately 75 percent of this area has been modified by previous mining activities, landfills, and dumping (Figures 2 and 3). It was difficult to ascertain which areas contained intact landforms. For the areas where there were no obvious disturbances, the morphology reflected highly eroded and scoured surfaces with exposed marls and gravels on the ground surface (Figures 4, 5 and 6). These areas also had man-made berms or levees that paralleled the project area, which may be the remnants of flood control features built during earlier gravel mining operations (Figures 7 and 8). Push piles consisting of concrete, limestone, and gravel were also observed in numerous locations along the project area between Bandera and Grissom Roads (Figure 9). Observed manhole covers indicated that several water/sewer lines were also in the project area (Figure 10). How much of the original surface remains in these areas is unknown.

Figure 2: Looking southeast along edge of landfill. The proposed trail follows along the top edge of the landfill.

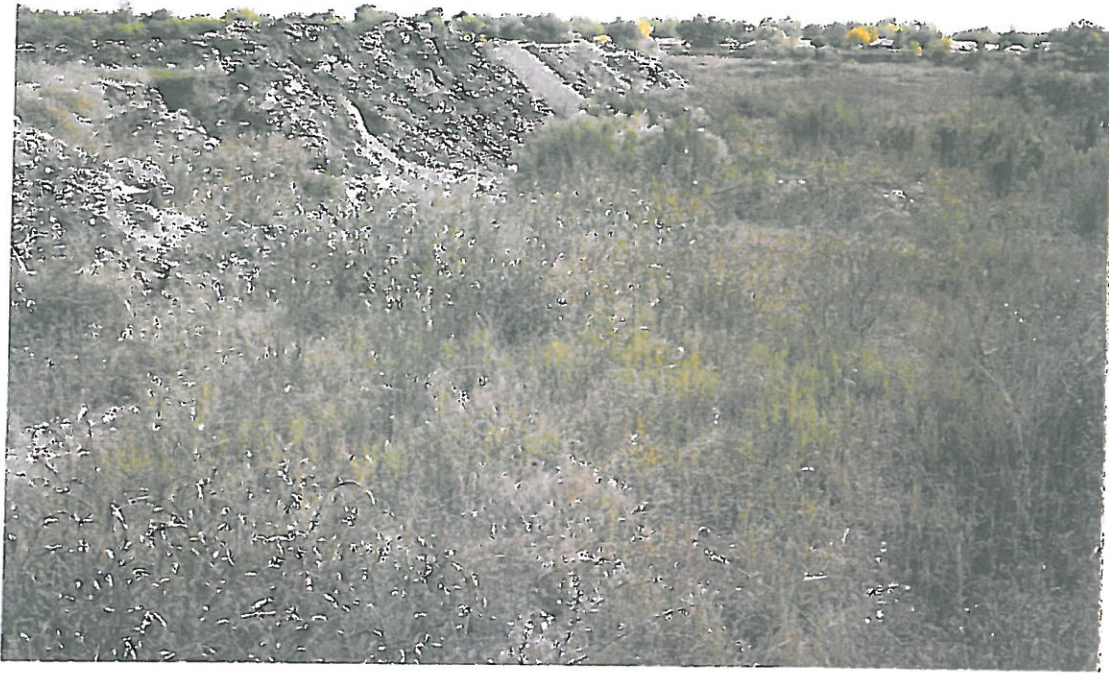


Figure 3: Dumping and scouring along the proposed trail, looking south.



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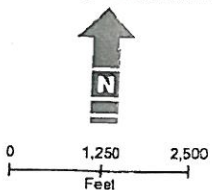
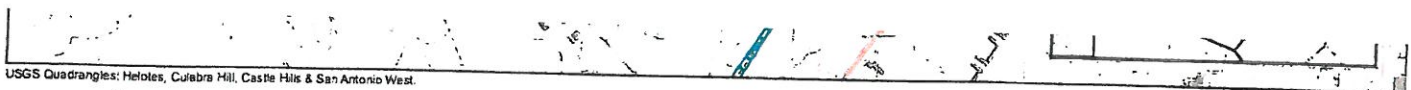


Plate 2
Results of Field Investigations

- Key to Features
- Shovel Test (Positive)
 - Shovel Test (Negative)
 - Archaeological Sites (Point)
 - Proposed Leon Creek Trail Alignment
 - Archaeological Surveys (Linear)
 - Archaeological Sites (Polygon)
 - Archaeological Surveys
 - Environmental Site Assessments
 - 1973 Gravel Mining

IMAGE REDACTED



- Key to Features**
- Shovel Test (Positive)
 - Shovel Test (Negative)
 - Archaeological Sites (Point)
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 - 1973 Gravel Mining

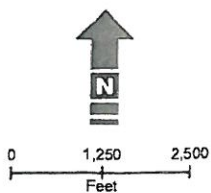


Plate 3
Results of Field Investigations

Figure 4: Exposed bedrock and scouring along proposed trail, looking south.



Figure 5: Deflated and braided stream channel in proposed project area, looking south.



Figure 6: Artificial levee immediately west of proposed project area, looking northwest.



Figure 7: Low area behind residential development with artificial levee at left.



Figure 8: Push pile of limestone and concrete immediately west of proposed project area.



Figure 9: Water or sewer main manhole on centerline of proposed project area.



Landforms that appeared to be intact were generally small and were shovel tested when encountered. In addition, approximately 40 percent of the project area between Bandera and Grissom Roads follows a two track road behind a residential subdivision (Figure 10). This two track road lies on top of a culturally modified terrace that was likely built to support the residential development. A transmission line and two man-made drainages traverse the project area along this road (Figure 11). South of the two track road, there is a small pasture area that appears to be intact, however shovel testing in this area revealed no cultural materials, and two of the shovel tests excavated (JC3a and JC3b) appeared to have contaminated soils (heavy chemical smell). The area just north of Grissom Road is covered by an asphalt parking lot (Figure 12), which then follows along the edge of the Leon Creek flood terrace through an undulating, heavily eroded terrain (Figure 13). Numerous push piles were also noted in this area and are likely the result of the adjacent residential development.

Figure 10: Looking north down two-track road behind residential development at transmission line crossing.



Figure 11: Artificial drainage just north of transmission line, looking northeast.



Figure 12: Asphalt parking lot just north of Grissom Road. The proposed trail follows along the outside edge of the parking lot.

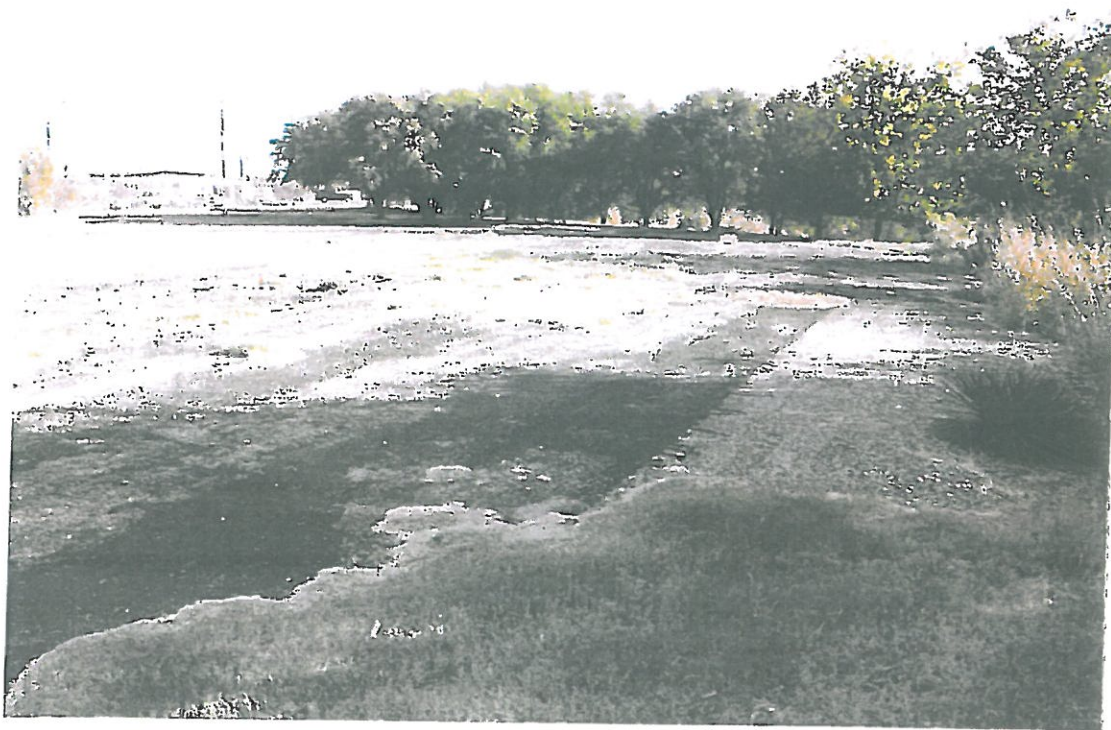


Figure 13: Looking north at areas north of asphalt parking lot. Note the artificial berm at left and dumping.



South of Grissom Road the proposed project area follows Leon Creek until it splits into two separate trails. The area between Grissom Road and the split follows an existing two track road for the first half of this segment before ascending to the top of an artificial terrace (landfill) (Figure 14) where it continues to the confluence of Leon Creek and Culebra Creek. The two track road in this area is heavily disturbed from erosion and demolition (push piles observed). The artificial terrace has exposed asphalt and trash along its edges. From the split in the trail, one segment heads to the west up Culebra Creek until terminating at Cathedral Rock Nature Park. The proposed project area along this western split appeared to be on intact terraces, but shovel testing revealed either shallow soils overlying gravel/caliche or disturbed sediments. This portion follows an existing two track road behind a residential subdivision before descending into the Culebra Creek channel (Figure 15) and then reemerging into the uplands at Cathedral Rock Nature Park. A small spur extends south off this western split across Culebra Creek and follows a two track road into the uplands and the behind a residential subdivision. This small spur also appears to follow along an artificially created terrace.

Figure 14: Landfill and artificial terrace just south of Grissom Road.



Figure 15: Proposed trail in Culebra Creek.



The second trail that splits south of Grissom Road proceeds to the south along the left bank of Leon Creek to Ingram Road (**Figure 16**). This portion of the project area exhibits the highest level of disturbance. Investigators noted the presence of a large gravel mine on the 1973 Culebra Hill USGS 7.5' Quadrangle map that encompasses most of the project area between the split and Ingram Road. This gravel mine area is included on **Plates 2 and 3**. Observations in the field supported this as the topography of the area was hummocky, with push piles, braided stream channels, and erosion scars (**Figure 17**). Two small spurs branch off of the main part of trail to trailheads at Brookport Road, Spiral Drive, and Timberbrook Road. The spur that extends to Spiral Drive and Timberbrook Road follows an artificial drainage feature (**Figure 18**). Near the southern end of this segment is the remains of a quarry that has been partially filled with landfill (**Figure 19**). For approximately 2,000 feet north of Ingram Road the area has been heavily used for dumping and possibly landfill as there is exposed asphalt and concrete appearing on the deflated landform and major trash piles of various modern refuse (**Figure 20**).

Figure 16: General view of project area between Grissom Road and Ingram Road, looking northwest.



Figure 17: Quarry tailings in proposed project area between Grissom Road and Ingram Road.



Figure 18: Artificial drainage leading to Spiral Drive and Timberbrook Road.



Due to the highly disturbed nature of the project area, the investigators were limited in where they could place shovel tests. As a result only 15 shovel tests were excavated in the project area, with two of these being positive for cultural material. The two positive shovel tests, BJ6 and MS2, were located within Site 41BX1593, a previously recorded site in Cathedral Rock Nature Park. Shovel tests on average extended to a depth of 30 cm below surface with some tests extending deeper. Disturbance and contamination were noted in four shovel tests, JC3, JC3a, JC3b, JC5, and JC6. A summary the shovel testing is given below in Table 2.

PREVIOUSLY RECORDED ARCHEOLOGICAL SITES

Sixteen previously recorded sites were identified within one kilometer of the proposed project area. Of these 16 sites only two, Sites 41BX73 and 41B1593, were found to possibly overlap with the proposed project. These two sites are discussed below.

41BX73

Site 41BX73 represents a single Native American burial that was discovered by Richard Steubing in the 1940s. The burial was reported to contain shell necklaces and “young” teeth. The site was recorded by Paul McGuff in 1971 and determined to be completely destroyed by pond construction. The site location is outside of the current project area (north of Bandera Road) and the portions of the project area closest to the site have been heavily disturbed by the bridge construction on Bandera Road. Due to the significance of disturbance within the survey corridor nearest the site location, no subsurface testing was conducted. The project will likely not impact significant intact components associated with Site 41BX73.

41BX1593

Site 41BX1593 was originally recorded during a 2004 archeological survey of Cathedral Rock Nature Park by Tierras Antiguas Archeological Consulting (Nickels 2004). At the time the site was recorded, it was described as a prehistoric scatter of fire cracked rock and debitage of unknown age found from the surface to 40 cm below surface on a wooded, high terrace overlooking Culebra Creek, north of a large transmission line right-of-way (Nickels 2004:36-37). The site size was recorded as 530 square meters. Though the SAL/NRHP eligibility of the site was undetermined, the investigators recommended avoidance of the site. Site boundaries were not fully delimited at the time of the Tierras Antiguas’ survey due to the site extending into private property and the project area limits (marked by the transmission line right-of-way). As described in detail below, pedestrian survey and two shovel tests (BJ6 and MS2) found the site to extend down slope west of the transmission line into a wooded area (Figures 21 and 22). The Bexar County Soil Survey indicates the soils to be Patrick soils, three to five percent in this area (Taylor et al. 1991).

Table 2: Results of Shovel Testing along the Lower Leon Creek Greenway

Shovel Test #	Depth (cmbs)	Site	Reason for Termination	Result	Notes
BJ1	0-10	n/a	Limestone bedrock	Neg.	South of Bandera Road on terrace; very dry and powdery (10YR 7/3) very pale brown silty clay.
BJ2	0-37	n/a	Limestone bedrock	Neg.	East side of Leon Creek on low terrace; (0-16 cm) very dry (10YR 7/3) very pale brown silty loam; (16-37 cm) moist (10YR 4/3) brown silty loam with increased tree roots.
BJ3	0-14	n/a	Extremely compact gravel and clay fill	Neg.	Between landfill and Leon Creek; (0-8 cm) dry (10YR 4/3) brown silty loam; (8-14 cm) very compact (10YR 5/2 and 7.5YR 4/4) grayish brown and brown gravelly clay fill.
BJ4	0-100	n/a	Max reach of shovel	Neg.	East of Leon Creek on flat terrace; (0-50 cm) loose (7.5YR 3/2) dark brown clay loam; (50-100 cm) same soil but more compact and clayey.
BJ5	0-10	n/a	Impenetrable gravels	Neg.	Near edge of high terrace overlooking Leon Creek; solid gravels within (7.5YR 4/3) brown powdery loam matrix; impossible to dig.
BJ6	0-53	41BX1593	Gravel (sterile)	Pos.	On slope between high terrace and Culebra Creek; (0-9 cm) loose (10YR 3/2) very dark grayish brown clay loam, 2 small tertiary flake fragments; (9-53 cm) compact (7.5YR 4/4) brown clay loam with 5% gravels.
BJ7	0-10	n/a	Solid gravels (bedrock?)	Neg.	On small, gravelly knoll; (10YR 3/1) very dark gray humic soil mixed with limestone gravels.
JC1	0-33	n/a	Dense gravels	Neg.	110 meters south of BJ1; very dry (10YR 7/3) very pale brown silty clay loam; dry and friable with over 25% gravels.
JC2	0-61	n/a	Dense gravels	Neg.	South of two-track road; (10YR 4/3) brown silty, sandy clay loam; dense gravels and caliche at 58-61cmbs.
JC3a & JC3b	0-30	n/a	Contaminated soil	Neg.	Shovel tests were abandoned because soil smelled of chemical contamination.
JC4	0-45	n/a	Dense gravels/caliche	Neg.	Upland terrace south of radio tower; (0-40 cm) friable (10YR 3/2) very dark grayish brown silty clay loam; (40-45 cm) calcareous (10YR 4/3) brown, gravelly silty clay loam.
JC5	0-20	n/a	Disturbed soil	Neg.	Adjacent to two-track road, west of Leon Creek in disturbed area.
JC6	0-25	n/a	Disturbed soil	Neg.	Adjacent to two-track road, west of Leon Creek in disturbed area.
MS1	0-40	n/a	Dense gravels	Neg.	Near southwest corner of neighborhood in open field; (10YR 4/2) dark grayish brown sandy loam with limestone gravels; becoming very dense at 30cmbs with 15-20% calcium carbonate.
MS2	0-65	41BX1593	Dense, sterile soil	Pos.	Northwest end of project area on low terrace; (0-50 cm) very dry (10YR 4/3) brown sandy clay loam with small limestone gravels, (20-30 cm) 1 light brown tertiary flake fragment, (30-40 cm) 1 grayish brown tertiary flake fragment (2 pieces), (40-50 cm) 1 light brown tertiary flake fragment (2 pieces), (40-55cm) 1 light brown, patinated tertiary flake fragment; (50-65 cm) very dry and compact (10YR 4/4) dark yellowish brown fine sandy clay with 15% calcium carbonate.

Figure 21: Plan Map of Site 41BX1593



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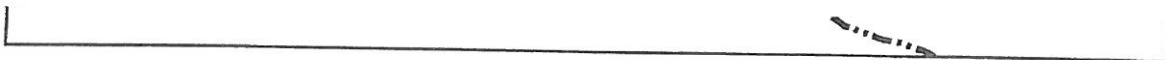


Figure 22: View of site extension area looking west from Shovel Test BJ6 toward Shovel Test MS2.



During the course of this survey, the areas adjacent to the previously recorded Site 41BX1593 were intensively inspected to assess the potential for elements of the site to be present. Pedestrian survey within the transmission line right-of-way, which also marks the terminus of the proposed Lower Leon Creek Greenway trail, found clear disturbance from placement of the power line poles and clearing of the right-of-way (Figure 23). At least one push pile was noted south of the transmission line, likely associated with its construction. Also, trail improvements along the lower terrace above Culebra Creek and the construction of an Americans with Disabilities Act – Compliant handicap accessible trail had impacted the landforms below the plotted location of Site 41BX1593 (Figure 24). No prehistoric artifacts were observed near the pedestrian paths and only a single flake was found within the transmission line right-of-way. However, two shovel tests, MS2 and BJ6, did encounter a very low density of chert debitage and possible fire cracked rock on the surface and up to 55 cm below the surface on the slope and relatively flat portion of the slope south of the transmission line right-of-way and above the existing trails. Only two shovel tests were dug at the site during the survey owing to obvious surface disturbance (natural and man-made) and the generally small site size within the project impact area.

Figure 23: Transmission line right-of-way with proposed trail terminus marked in pink and orange on the surface.



Figure 24: View looking west from Shovel Test BJ6 at area of ADA trail improvements



Shovel Test MS2 was placed approximately 20 south meters of the transmission line within the proposed project alignment. Shovel testing encountered a total of five pieces of small tertiary chert debitage on the surface or from subsurface deposits, all of which were broken. A single, very small flake was found on the surface beneath the leaf litter. Between 20 and 55 cm below the surface a single flake was recovered in each 10 centimeter level. At least two of the flakes appear to be from a single piece broken during the excavation, artificially raising the number of artifacts recovered. The artifacts were found to occur in brown (10YR4/3) very dry, sandy clay loam with small limestone gravels that transitioned at 55 centimeters below surface to a dark yellowish brown (10YR4/4) very hard, fine grained sandy clay with approximately 15 percent calcium carbonate inclusions. Artifacts were absent below the transition point.

Shovel Test BJ6 was placed approximately 15 meters southwest of Shovel Test MS2. This shovel test was placed on a low gradient slope where a single heavily patinated primary flake and several pieces of possibly burned or naturally eroding limestone were observed on the surface. The determination was made to place the shovel test in this location instead of further south along the project area alignment owing to the presence of several deep erosional gullies that cut the landform and clearly diminish the potential for site deposits of any integrity to be present (**Figure 25**). Excavation of the shovel test recovered two additional broken tertiary chert flakes in the upper nine centimeters below the surface, suggesting that the site continued to occur in this area as well, but that the deposits are increasingly thin as the slope continues west toward Culebra Creek. Artifact recovery was associated with the upper soil deposit which was a very dark grayish brown (10YR3/2) loose clay loam. This deposit appears to be primarily a combination of colluvial redeposition and recent in situ soil formation. Below nine centimeters of depth, a culturally sterile compact clay loam with approximately five percent small limestone gravels was encountered to a depth of 53 cm below the surface. This, in turn, was underlain by a deposit of unsorted gravels, at which point the shovel test was terminated.

Figure 25: Gullies on surface southeast of Shovel Tests MS2 and BJ6.



Based on the results of the shovel testing and pedestrian survey, Site 41BX1593 was shown to extend downslope to the south and west of its original location and the site boundary has been expanded to reflect the larger size of the site based on the presence of prehistoric artifacts, raising the site size to a total of 8,013 square meters (1.98 acres). It is possible that the site is also present along the upper terrace east of the Tierras Antiguas' survey and north of the current project area, but a visual inspection of the area indicated that the surface had been modified by private development and that no artifacts were visible, thus the site boundary was not drawn to include this area. The very low density of artifacts and their recovery on a slope below the apparent focus of the archeological site suggests that portions of Site 41BX1593 that occur within the current project area are likely the result of colluvial redeposition of artifacts from the upper terrace. As such, the artifacts are considered to have very low integrity and do not contribute to the SAL or NRHP eligibility of the site. It is the opinion of the Principal Investigator that the portions of the site within the proposed project area do not warrant further archeological investigations.

CONCLUSIONS AND RECOMMENDATIONS

The results of the intensive linear archeological survey of the City of San Antonio's proposed Lower Leon Creek Greenway indicate a high level of disturbance both within and adjacent to the project area. The entire project area contains a myriad of cultural transformations including gravel mining, terrace modification, construction of artificial terraces or berms, and dumping and landfill use. In addition, the floodplains of both Leon Creek and Culebra Creek are prone to high velocity flood episodes that have exacerbated erosion in the project area. It is the opinion of the investigators that the probability for intact landforms within the proposed project area is extremely low. In fact, the only intact landforms noted during the course of the survey were located at the terminus of the trail along Culebra Creek in Cathedral Rock Nature Park.

A total of 15 shovel tests were excavated during the course of the survey, two of which were positive for archeological deposits. Two previously recorded sites, 41BX73 and 41BX1593, were mapped as possibly overlapping with or very close to the proposed project area, however no evidence of Site 41BX73 was found within the project area. Elements of Site 41BX1593, consisting of a low density scatter of lithic debitage, were found to extend into the proposed project area. It is the opinion of the investigators that these deposits are the result of colluvial redeposition from an adjacent upland terrace, where Site 41BX1593 was originally recorded. No other cultural resources were identified within the proposed project area.

Based on the results of the survey it is concluded that the portions of Site 41BX1593 within the proposed project area are not eligible for inclusion in the NRHP or for designation as a SAL. Furthermore, the extreme level of disturbance within the proposed project area has resulted in a very low probability for encountering intact archeological deposits. Therefore, it is the opinion of the Principal Investigator that the proposed undertaking will have no effect upon historic properties and it is recommended that the project be allowed to proceed to construction based on the current design. While this report represents the final recommendations for the project and the sites described herein, should additional unrecorded, significant cultural features be encountered in the course of the development, activity should be halted immediately and the THC contacted for further guidance relative to the TAC and Section 106. This report is offered in partial fulfillment of TAC Permit #5074, and all project related documents will be curated at TARL upon acceptance by the THC.

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